



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,745	09/11/2003	Arthur Springsteen	SPRINGSTEEN1	3465
1444	7590	08/23/2005	EXAMINER	
BROWDY AND NEIMARK, P.L.L.C. 624 NINTH STREET, NW SUITE 300 WASHINGTON, DC 20001-5303			POLYZOS, FAYE S	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/659,745

Applicant(s)

SPRINGSTEEN ET AL.

Examiner

Faye Polyzos

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2,5,7-14,16-17,20 is/are rejected.
- 7) ☒ Claim(s) 3,4,6,15,18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/3/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by *Edgar et al* (US 4,465,929).

Regarding claim 1, *Edgar* discloses a reference standard for calibration of an analysis instrument (infrared absorption gauge), the reference standard (i.e. hydrated salt) comprising a solid body formed of a number of compounds and a substrate having scattering properties similar to a product to be analyzed with the analysis instrument and being spectrally neutral in a wavelength range to be used in the analysis instrument, wherein the substrate and the compounds in combination (sample zone), with respect to intensity, wavelength and scattering properties, imitate the spectral response of the product to be analyzed with the analysis instrument (See Generally Fig. 2 and col. 1, lines 5-10, col. 6, lines 24-29, col. 9, lines 64-68 and col. 10, lines 1-14).

Regarding claim 2, *Edgar* discloses wherein a compound imitates the spectral response of a physical property of the product to be analyzed, which physical property is one in the group of moisture, protein content, fat content, oil content, optical density, fiber content, starch content, sugar content and wavelength markers (col. 1, lines 5-15).

Regarding claim 7, *Edgar* discloses the substrate is spectrally neutral in the visible and near infrared region (frequency range) (col. 6, lines 5-12).

3. Claims 10-14, 16-17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by *Andersen et al* (US 5,933,792 A).

Regarding claim 10, *Andersen* discloses of a method for calibration of an analysis instrument (FTIR instrument), the method comprising recording, by means of the analysis instrument, the spectral response of a reference standard comprising a solid body, which with respect to intensity, wavelength and scattering properties imitates the spectral response of a product (gaseous sample or liquid sample) to be analyzed with the analysis instrument, evaluating the difference between the spectral response from the analysis instrument and an expected spectral response, calibrating the analysis instrument according to the result of the evaluation (col. 10, lines 57-65, col. 11, lines 8-13, lines 43-67 and col. 12, lines 1-10).

Regarding claims 11-13, *Andersen* discloses the expected spectral response is obtained by recording, by means of a reference is obtained by recording, by means of a reference instrument, the spectral response of the reference standard wherein the reference instrument is a master instrument such as spectrometers (col. 11, lines 44-67 and col. 12, lines 1-26).

Regarding claim 14, *Andersen* discloses the method wherein recording comprises irradiating the reference standard with electromagnetic radiation and spectrally detecting the electromagnetic radiation which has been transmitted through or

Art Unit: 2878

reflected from the reference standard (col. 4, lines 62-65, col. 10, lines 57-65 and col. 11, lines 43-65).

Regarding claims 16-17, *Andersen* discloses evaluating comprises directly comparing the spectral response from the analysis instrument with the expected spectral response wherein the evaluation method further comprises a mathematical prediction of a set of parameters from an equation predicting composition (col. 18, lines 19-55).

Regarding claim 20, *Andersen* discloses recording method wherein the spectral response of a reference standard comprises recording the spectral response of a reference standard that comprises a solid body formed of a number of compounds and a substrate having scattering properties similar to a product to be analyzed with the analysis instrument (spectrometer) and being spectrally neutral in a wavelength range to be used in the analysis instrument, wherein the substrate and the compounds in combination with respect to intensity, wavelength and scattering properties imitate the spectral response of a product to be analyzed with the analysis instrument (col. 3, lines 4-14).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2878

5. Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over *Edgar et al* (US 4,465,929) as applied to claim 1 above, and further in view of *Rosenthal et al* (US 4,761,552).

Regarding claim 5, *Edgar* discloses a reference standard for calibration of an analysis instrument, the reference standard comprising a solid body formed of a number of compounds and a substrate having scattering properties similar to a product to be analyzed with the analysis instrument and being spectrally neutral in a wavelength range to be used in the analysis instrument, wherein the substrate and the compounds in combination, with respect to intensity, wavelength and scattering properties, imitate the spectral response of the product to be analyzed with the analysis instrument (See Generally Fig. 2 and col. 1, lines 5-10, col. 6, lines 24-29, col. 9, lines 64-68 and col. 10, lines 1-14). *Edgar* does not disclose the substrate is polytetrafluoroethylene (PTFE). *Rosenthal* discloses a reference standard wherein the substrate is polytetrafluoroethylene (PTFE) (col. 1, lines 53-68). *Rosenthal* teaches a standard which can tolerate some of the normal handling conditions which occur in field use of instruments and still not degrade its optical characteristics by providing a fixed stable standard for near-infrared reflectance measurement with an optimum reflectance wavelength range by utilizing a sample holder having a near-IR-quartz window and a measured amount of (PTFE) powder pressed directly against such IR-quartz window so as to have a fixed density and provide a permanent reflectance standard that is protected behind the quartz window (col. 1, lines 47-50 and lines 53-68). Therefore it would have been obvious to modify the apparatus suggested by *Edgar* to provide a

Art Unit: 2878

reference standard wherein the substrate is (PTFE), as suggested supra by *Rosenthal*, to allow for a more versatile apparatus.

6. Claim 8 rejected under 35 U.S.C. 103(a) as being unpatentable over *Edgar et al* (US 4,465,929) as applied to claim 1 above, and further in view of *Andersen et al* (US 5,933,792 A).

Regarding claim 8, *Edgar* discloses the reference standard wherein a compound imitates the spectral response of a physical property of the product to be analyzed, which physical property is moisture (col. 1, lines 5-15). *Edgar* does not disclose the product to be analyzed is one in the group of feed, forage, grain, flour, meal, protein, extracts, derived agricultural products, sugar, sweeteners, meat and dairy products. *Andersen* discloses the reference standard wherein the product to be analyzed may be dairy products, meat, grain, etc. (col. 5, lines 1-7). *Andersen* teaches optical spectra may be generated from virtually any type of sample, such as gaseous samples, solid samples, such as cheese, grain or meat, or liquid samples such as milk or milk products (col. 5, lines 1-7). Therefore, it would have been obvious to modify the apparatus suggested by *Edgar* to provide a reference standard wherein the product to be analyzed is one in the group of feed, forage, grain, flour, meal, protein, extracts, derived agricultural products, sugar, sweeteners, meat and dairy products, as disclosed supra by *Andersen*, to allow for a more versatile apparatus.

7. Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over *Edgar et al* (US 4,465,929) as applied to claim 1 above, and further in view of *Crozier et al* (US 5,892,229 A).

Regarding claim 9, *Edgar* discloses a reference standard for calibration of an analysis instrument, the reference standard comprising a solid body formed of a number of compounds and a substrate having scattering properties similar to a product to be analyzed with the analysis instrument and being spectrally neutral in a wavelength range to be used in the analysis instrument, wherein the substrate and the compounds in combination, with respect to intensity, wavelength and scattering properties, imitate the spectral response of the product to be analyzed with the analysis instrument (See Generally Fig. 2 and col. 1, lines 5-10, col. 6, lines 24-29, col. 9, lines 64-68 and col. 10, lines 1-14). *Edgar* does not disclose the product to be analyzed is a pharmaceutical. *Crozier* discloses the reference standard wherein the product to be analyzed is a pharmaceutical (col. 1, lines 12-32). *Crozier* teaches analysis of biological challenges determine if any bacteria has survived the sterilization process and if all the bacteria has been killed, the equipment and the barrier have been properly sterilized (col. 1, lines 28-32). Therefore, it would have been obvious to modify the apparatus suggested by *Edgar* to provide a reference standard wherein the product to be analyzed is a pharmaceutical, as suggested supra by *Crozier*, to allow for a more versatile apparatus.

Allowable Subject Matter

8. Claims 3-4, 6, 15 and 18-19 are objected to as being dependent upon a rejected based claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

Regarding dependent claim 3, the prior art, as stated supra, does not disclose or fairly suggest a reference standard, as disclosed supra, wherein the compound is inorganic.

Regarding dependent claim 4, the prior art, as stated supra, does not disclose or fairly suggest a calibration of an analysis instrument wherein the substrate is a fluorinated substrate.

Regarding dependent claim 6, the prior art, as stated supra, does not disclose or fairly suggest a reference standard, as disclosed supra, wherein the compounds in the solid body are homogenously distributed within the solid body.

Regarding dependent claim 15, the prior art, as stated supra, does not disclose or fairly suggest a method of transforming the spectral response from the analysis instrument and the expected spectral response into factor space based on the properties of the product to be analyzed on the analysis instrument.

Regarding dependent claim 18, the prior art, as stated supra, does not disclose or fairly suggest an evaluation method of comparing the spectral response from the analysis instrument with the expected spectral response in factor space.

Regarding dependent claim 19, the prior art, as stated supra, does not disclose or fairly suggest a method of irradiating the reference standard with electromagnetic radiation and scanning the radiation over wavelengths being within the range of visible and near infrared light.

10. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

Art Unit: 2878

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

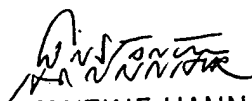
Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Polyzos whose telephone number is 571-272-2447. The examiner can normally be reached on Monday thru Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FP


CONSTANTINE HANNAHER
PRIMARY EXAMINER
GROUP ART UNIT 2878